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COCKERMOUTH RURAL DISTRICT.

TO THE CHAIRMAN AND MEMBERS OF THE COCKERMOUTH RURAL DISTRICT COUNCIL.

Gentlemen,

In compliance with the order of the Local Government Board I again present you with my fifth Annual Report on the Vital Statistics and Sanitary Condition of this district for the year 1911.

The census population was 22233 as against 22250 my estimated population for the 3 preceding years of 1908-10 a difference of 17 which is easily accounted for by the serious loss to the area through Emigration of the best of our Countrymen and persons who have aided to build up your district. The loss of persons of this type means more than you can ever realise. Honest, hard-working persons, truthful to the core—remember the day will come when you shall find England in the same position as Rome which many years ago fell.

Should this report reach others in the district, as I hope it may, who are not on the District Council, I may remind them that they can individually assist in improving the Sanitary conditions of the District by giving special attention to their surroundings, seeing that their drains and water supply are in a satisfactory condition, and by giving notice to the Inspector of Nuisances of the presence of any condition which may injure health.

Clergymen, Nurses, and District Visitors have many opportunities of speaking in season to whom they minister, as to the importance of cleanliness, want of fresh air in their houses, the proper feeding and rearing of children. Great neglect in a scattered district like this and the long journeys to school and the enforced demands on parents to send their children to school during the wild weather and the absence of means for providing a warm meal in the middle of the day for these children, naturally requires some attention.

The following is a statistical Summary of the Birth and Death Rates for the Year compared with the Rates for England and Wales during the same Period.

Rates calculated per 1,000 of the population :—

	For 1911	For England and Wales		
		1911	1910	1909
Birth-rate ...	26·4	24·4	24·8	25·6
Corrected Death-rate	12·4	14·6	13·4	14·5
*Infantile Mortality	112	130	106	109
Zymotic Death rate...	0·89	—	0·99	1·12
Phthisis Death-rate ..	0·49	—	—	1·081
Cancer Death-rate ...	0·58	—	—	·952

*These figures are per 1,000 births and *not* per 1,000 of the population.

Hospital accommodation for the district—one for Scarlet Fever—10 Beds and 5 Cots which is totally inadequate for the district. No steam disinfector. The structure is of wood covered entirely with corrugated iron—not water tight in wild weather, and the heating appliances are inadequate. The building, through careful nurses, has done much good to prevent the spread of Scarlet Fever in your area, but a much more substantial building is required. So far the new Smallpox Hospital has not been required—but the building is practically in a state for admission of a patient should such an unfortunate occurrence arise.

The time has arrived that to do the duties required by your Medical Officer of Health for this area and attend to his suggestions is absolutely absurd. Repeatedly by my predecessor and myself have cases of insanitation been brought before your notice, and how much has been carried through? The Local Government Board's suggestions have been ignored—expenses incurred for the special Engineers inquiries without any satisfactory results in my time. Special Reports demanded re the drainage of Areas by the Local Government Board which had frequently been brought before your Council—e.g. Broughton, Braithwaite, Rosthwaite, Great Clifton sewerage, and what has been done?—nil.

Vide pages 23 and 24, 1909 report.

What about the water supply to Bassenthwaite? Vide page 25, 1909. Furthermore other areas. It appears to me that the Local Government Board should have the observations of their Medical Officers of Health for the year under review.

With regard to the village of Flimby this district will not improve from a sanitary point of view—Vide page 23, 1909.

With reference to the water supplies for Bullgill Brow and Greengill notwithstanding frequent reports on the same : nothing appears to have been done.

In consideration to the Rivers Pollution Act I can simply draw your attention to my reports and statements therein recorded—Vide page 24, 1909, conditions remaining in *statu quo.*

With regard to the water supplies of Applethwaite and Grange-in-Borrowdale the conditions are disgraceful.

I desire to express my thanks to G. S. Wilson, Esq., for the rainfall.

JOHN PENNY, M.B., D.Sc., F.R.S.E.
(Medical Officer of Health).

REPORT.

Area

The area of the district in statute acres (exclusive of area covered by water) is 158,113·464.

Physical Features

The district presents a great diversity of surface, as from its central position and extensive area it commands the most magnificent scenery, both mountain and lake, of any in the County of Cumberland. It extends from Threlkeld Granite Quarries to the Solway, near Allonby, and from Dunmail Raise to Distington. The drainage of the district is mainly accomplished by means of the river Derwent and its tributaries, the Greta, Bloomer, Cocker, and Marron. The Derwent rises in Borrowdale and flows in a northerly direction into the southern end of Derwentwater, near Lodore. At Portinscale, Keswick, nearer the west, it leaves the lake and receives the water from the Greta (which has its source in Scales Tarn lying at the foot of a perpendicular rock on Saddleback), and into which St. John's beck discharges after flowing from lake Thirlmere through St. John's-in-the-Vale. Three miles north-west of Keswick the Derwent enters Bassenthwaite Lake, and after flowing through this extensive sheet of water leaves it at the opposite end near Ouse Bridge, where it continues its tortuous and picturesque course in a westerly and south-westerly direction to Isel to receive the water from a tributary (the Bloomer) draining the Bewaldeth district, after which it flows to Cockermouth where it is joined by the Cocker (which drains the lakes of Buttermere, Crummock and Loweswater, through the Vale of Lorton) afterwards flowing in a westerly direction for about five miles to take the water from the Marron, and to continue its journey to the sea into which it discharges at Workington. Another river, the Ellen, which has its source in Overwater, partly forms the boundary on the north side between the Rural Districts of Cockermouth and Wigton, and eventually flows into the Solway, at Maryport.

Chief Occupation of the inhabitants

The principal industry is agriculture, although a certain percentage work at the coalmines and quarries.

Geology

Beneath the red marl of the western district coal is found. Appertaining to the Whitehaven coalfield some of the local seams extend for three or four miles under the sea. Collieries proceed along the coast past Harrington, Workington, Flimby, Broughton Moor, Maryport, and extend inland to Aspatria and Mealsgate.

Limestone is abundant in many localities, and granite in some few districts. Slate of excellent quality is found at Borrowdale, and at the extensive quarries high up on Honister Craggs.

Climate The climate is variable, as in the mountainous localities it is often wet and piercingly cold, while the lowlands possess a mild temperature. The prevailing winds are from the south-west, and being charged with moisture discharge a heavy rainfall.

Plans Plans for new buildings approved in 1911 :—

PARISH.		New Buildings (Houses)	Additi'ns	Stables, Farm Buildings, etc , etc
Blindbothel	...			New byres
Above Derwent	...		3	Houses and stables
Borrowdale	...		1	Bedrooms and garage
Goat	...	1	1	Houses and alteration cricket pavilion
Flimby	...	16		Porch, farmbuildings
Gilcrux	...			New sanitary arrangements & washhouse
Bothel	...		1	Chapel enlarged
Dean	...			New sanitary arrangements at schools
Dearham	...	1		New house and farm buildings
Braithwaite	...	1	1	New house and shop enlargement of house
Oughterside	...		1	Enlargement of chapel
Great Clifton	...	1		Washhouse
Embleton	...	1		New farm buildings
Brackenthwaite	...	1		New farmhouse and new drainage
Underskiddaw	...	1		New house
Camerton	...	1		New house
Seaton	...	10		New house
St. Johns	...	1		New farm buildings
Wythop	...			,, drainage for station
Newlands	...		2	Houses enlarged
Setmurthy	...	1		New vicarage

Population According to the 1911 census the population of the district was 22,233.

Birth-Rate There were registered throughout the entire district 588 births (308 males and 280 females), and of these 29 (12 males and 17 females) were illegitimate. The rate for the year is slightly lower than the average for the past 10 years, being 26·4.

The percentage of illegitimates to total births is 4·9, as compared with 4. 7, the rate for 1910.

The birth-rate for England and Wales for 1911 was 24·4.

Death-Rate from all causes The deaths actually registered in the district were 273 (130 males and 143 females), or 60 less than 1910, and the death-rate from this *uncorrected* figure amounts to 12·2 per 1,000 persons living. To get anything like a correct death-rate various corrections must be made, and 4 persons belonging to the district who died in extraneous districts must be therein added which brings up the total of 277, or 12·4 per 1,000 of census population of 1911.

These 4 deaths occurred in other institutions.

The corrected death-rate for England and Wales for 1911, was 14·6 per 1,000.

Senile Death-Rate

One hundred and two were the number registered 65 years and upwards, which represents a senile death-rate of 27·1 per cent of the total deaths against 34·2 for the corresponding period of 1910.

Inquests

During the year 13 inquests were held, three being suicides, six accidents and one case of each to the following causes, death from exposure, found drowned, found dead in bath, and cerebral hæmorrhage.

Uncertified Death

The number of uncertified deaths was twelve, similar to last year.

Infantile Mortality

The total deaths under the year of review, rather remarkably correspond with the same number for the preceding year. This shows no increase and the percentage according to our new census returns is somewhat increased, owing to the decrease in population. Unfortunately, the deaths recorded thereby of these infants show an increase on the past year, viz :—112 against 110.

1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
112	110	92	172	117	120	147	136	114	123

Table V shows the causes of death among infants.

Notification of Births Act

This has not been adopted by this Council.

Midiwves' Act, 1902

This Act is now directly administered by the County Council under the supervision of a Nurse.

Cancer

Cancer proved fatal in 13 cases as compared with 19 in the former year of 1910, which is equivalent to a rate of 0·58, as corresponding to 0·85 per 1000 of the population for the year 1910.

The number of deaths each year from Cancer.

1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
13	19	21	26	20	17	15	17	19	9

Considering the enormity of this disease in such a small locality it has drawn my investigations to the causation thereof. After several years of observations I find that, notwithstanding good sanitary conditions in rural districts the increase is much more increased than in seaside places. Cancer I find to be more prevalent in inland areas on the statistics which are returned which I have investigated for the past years.

Tuberculosis Phthisis

There were 11 deaths registered as being due to phthisis. Besides the above, three deaths were assigned to other forms of tubercular diseases. The following table gives the age at death :—

YEAR.	At all ages.	Under 1 year.	1-5	5-15	15 25	25-65	Over 65 Years.
1911	11				4	6	1
1910	23			3	3	14	3
1909	18			1	4	11	2
1908	8			1	3	4	
1907	21				2	17	2
1906	16			3	6	7	
1905	14		1	1	4	8	
1904	13			1	2	9	1
1903	11			1	4	6	
1902	13			3	2	6	2

The death-rate from consumption is equal to 0·49, as compared with 1·03 per 1,000 for 1910; which shows a considerable reduction, the reason for which I am unable to account.

TUBERCULISATION AND DETUBERCULISATION.

The above was the title of the important address delivered by Dr. R. W. Philip before the International Congress of Tuberculosis at Rome. He commenced by pointing out that mankind was responsible for tuberculosis. It was a vicious by-product of an incomplete and ill-informed civilisation. If the baneful outcome of misguided civilisation had been tuberculosis the role of an enlightened civilisation must be detubercularisation. What an ignorant civilisation had introduced an educated civilisation could remove.

Pathological and Clinical facts had steadily accumulated which show that for the most part the tuberculosis of adolescent and adult life was but the harvest of seed sown years ago.

The more carefully Pathological examination had been carried out in children dying from all kinds of disease the more they were forced to believe that the advent of tuberculosis in childhood was most frequent.

Statistics of numerous Pathological observers tended towards the common conclusion that by the time the fifteenth year was reached 75% of the children had been tubercularised. From the Clinical side no less striking facts had emmerged as methods of examination had been refined. In an address before the last congress at Washington, he stated that personal observations in relation to school children at Edinburgh had led him to conclude that at least 30% of such children presented evidence of Tuberculosis determinable by ordinary Clinical tests.

Subsequent observations had convinced him that the estimate was within the truth. It was strikingly corroborated when, in addition to the determination of physical signs, resource was had to one or other adaption of the tuberculin tests. The collective evidence from different countries went to show clearly that it was possible clinically the existence of tuberculosis in the majority of school children. What was true of man was no less true of cattle. The overcrowded, airless, foul and infected byre repeated for the calf the gruesome stages of Tubercularisation. The first step towards a wholesome milk supply was the re-creation of the environment of the cow. The facts of comparative pathology supported the view. A pretty illustration might be had from the experience of Zoological Gardens, where an extrordinary improvement in health had occurred when animals from warm countries, for whom specially heated houses were formerly thought necessary,had been boldly placed in the open air. The tendency for the caged monkey to become tuberculous was overcome when open air measures were pursued. Japanese apes when brought to London, instead of being placed in superheated apartments had been kept outside, with the result that, for the first time on record they had bred under captive conditions, and the offspring had proved strong and vigorous. Similarly, a fine mandril, which had lived in France in a small cage heated with a stove, was transferred in London, to the open air, with rapid improvement in health and the development of a magnificent coat.

Assuming that it was the intention of a community or a nation to detubercularise itself, the first requisite was a clear conception of the issues. The larger facts of tuberculosis must be grasped. There must be a dropping of mere sentimentality regarding particular cases. An effective opposition must be offered to an infective endemic disease, which involved a people, and was dependent on conditions which they themselves had created. Explicitly, and without panic, the people must be taught from day to day that tuberculosis came of their disregard of physiological law for themselves and for their cattle. Thereby a high standard of national and personal cleanliness would be evolved in presence the tubercle-bacillus would be greatly discounted. City improvements would mean the wiping out of the bacillus's breeding grounds. Each new street, each new building, would be an object lesson. The parable of the Zoological Garden would be transferred to the household. The airless, overheated, and often polluted cage, sometimes called nursery, sometimes school, sometimes hospital, in which the child was allowed to pine would be superseded. The general adoption of *al fresco* nurseries and *al fresco* schools would effect more in a generation than all the hospitals in the world have done throughout the centuries. Make it an offence to rear young life from the vitalising atmosphere, and the detubercularisation of a people was inaugurated. What applied to the child applied no less forcibly to that of adult life, in the home, the workshop, and the meeting-place.

Proceeding to indicate the main features of an anti-tuberculosis scheme, Dr. Philip said :—" For every considerable community there must exist a centre which should concern itself in the widest possible way with the facts of tuberculosis as it existed in the area. Here every aspect of tubercularisation would be dealt with, and every line of detubercularisation would be conceived and realised. Towards the centre enquiries from all sides regarding tuberculosis should be directed. To the centre patients in all stages of tuberculosis should be invited, and likewise persons who might be anxious lest they should be tuberculous. The Edinburgh Co-ordinated Anti-Tuberculous Scheme which commenced with the foundation in 1887 of the Tubercular Dispensary, had been gradually evolved so as to include the various elements found to be requisite. These comprised compulsory notification—the tuberculous dispensary—the Sanatorium for early cases, the hospital for advanced cases, the tuberculous school, and the farm colony. In Great Britain this question seems rapidly ripening towards solution. For the first time in history the treatment of Tuberculosis had been formally dealt with by Act of Parliament. A visit is paid to the house on receipt of a notification, and particulars obtained as to the duration of the illness, the existence of disease of a suspicious character in other inmates of the household and similar matters, the sanitary conditions of the premises are investigated. When a patient dies the rooms principally used are disinfected. Sometimes opposition is offered to the process of disinfection. When a patient remains at home a hanging card should be sent giving instructions for the prevention of infection of other members of the family, and a pocket sputum receptacle should be provided free, as well as disinfectants. If members of the household attend a public elementary school a list of these should be forwarded to the School Medical Officer.

There are no facilities of any kind for institutional treatment of patients (other than the Blencathra Sanatorium at Threlkeld). Great benefits might be obtained by converting the new Conjoint Smallpox Hospital into a Sanatorium whilst not used for the purpose of treatment of smallpox, also shelters could be erected in the adjoining ground. The matter of Sanatorium Provision at an early date is somewhat complicated by the passage of the National Insurance Act, whilst this Act and the Finance Act, contemplate the provision of funds for the purpose of Institutional treatment. Local authorities are somewhat loth to embark upon capital expenditure until the procedure has become more definitely established.

The Local Government Board have this year issued a new tabular form for inclusion in annual reports as to sanatorium and hospital accommodation for phthisis, but as every entry would be "nil" as regards this district I have omitted it.

One of the objects aimed at by sanatoria is of an educational nature. The patient is taught the value of fresh air, simple food, regular habits, and how to prevent himself from being a danger to other inmates of his house when he returns home.

Zymotic Death-Rate

The Zymotic Death-rate is calculated from the number of deaths due to the 7 principal zymotic diseases· The following table gives them and the deaths recorded from each :—

Smallpox	0
Measles	0
Whooping Cough	6
Diphtheria and Membraneous Croup	5
Scarlet Fever	1
Fever — Typhus	0
Fever — Enteric	0
Fever — Continued	0
Diarrhœa	8
Total	20

The Zymotic Death-rate for the year is equal to 0·89 per 1,000 as compared with 1·43 per 1,000 for 1910 of the census population. The rate for England and Wales for 1910 was 0·99 per 1,000.

Smallpox

No case was notified during the year.

Notifiable Zymotic Diseases

Under the Infectious Diseases (Notification) Act, 1889 164 cases of infectious diseases were notified during the year, as compared with 140 for the preceding year.

The following table gives the number of notifications during each month of 1911 :—

1911	Diphtheria	Enteric Fever	Puerperal Fev'r	Scarlet Fever	Erysipelas	Totals
January ...	1			8	2	11
February ...				4	1	5
March ...				41		41
April ...	1			38		39
May ...	5			1	2	8
June ...	2			8		10
July ...		1		9	1	11
August ...	1		1	2	2	6
September ...	2			1		3
October ...	10			2	1	13
November ...	2		1	7		10
December ...	3			3	1	7
Total	27	1	2	124	10	164

From these diseases there were 6 deaths, viz. :— diphtheria, 5 ; scarlet fever, 1.

The following table shows the number of infectious diseases notified in each of the 4 sub-registration districts, viz. :—

District	Scarlet Fever	Diphtheria	Erysipelas	Puerperal Fever	Enteric Fever	Total
(A) Keswick Rural	5	4				9
(B) Cockermouth Rural	1	9	4			14
(C) Workington Rural	29	9	4	1	1	44
(D) Maryport Rural	89	5	2	1		97
						164

The following table shows the number of notifications during the past 5 years :—

Diseases.	1911	1910	1909	1908	1907
Smallpox					
Diphtheria & Membran'ous Croup	27	24	36	18	19
Enteric Fever	1	2	4	15	9
Puerperal Fever	2			1	
Scarlet Fever	124	190	86	58	61
Erysipelas	10	17	14	12	9
Totals	164	233	140	104	98

Scarlet Fever

During the month of April no less than sixty cases of scarlet fever were notified, chiefly on Broughton Moor. The hospital was over-crowded and many parents wished their children removed to same, which was impossible. I recommended that another ward be erected. This was not considered. The schools were closed and disinfected. The origin of this out-break, so far as I could ascertain, might have been traceable to the present method of transference of books from one school to another. At the request of the Sanitary Committee I made strict investigation into this matter, with result that certain books had been issued within the previous fortnight. One in particular, which was given to the scholars of the classes wherein the outbreak occurred, were stated as being new works. On the strictest personal observation I found instead of them being new works, lead pencilled translation, were recorded from French on page 45 and 46

This appeared in twenty out of 30 copies. Information revealed that this translation had not been made at this particular school. Out of the 124 cases notified for the whole area, 29 were located in the Workington Rural District, and 89 in the Maryport Rural District.

Diphtheria The second outbreak among the scholars attending Setmurthy school during the past twelve months broke out with one fatal case. The attention of your Council was drawn to the unsatisfactory water supply to this area some time ago.

A case of diphtheria also occurred at Great Broughton. This appeared attributable to the insanitary condition of an open channel passing down behind the dwelling, which emitted a most offensive effluvium. This can only be remedied by a proper sewerage scheme for the village and which on more than one occasion has been brought before your notice.

A case occurred in a male child 3 years and 2 months residing at Sunderland. This child had been at an Urban District outside. A choked drain on the main road, now remedied, gave off a very bad smell, furthermore, also a large pool of stagnant water was in close proximity to this dwelling, the dried mud of the edges being black.

In October an epidemic of diphtheria broke out in the neighbourhood of Dean and many of the sufferers attended Dean school The privies of these schools discharged into an open ashpit, ordinary stone and plaster wall urine sinks into the ground and base of walls. The existing conditions on inspection were a serious menace to the health of the children attending these schools and I strongly urged that water closets be provided, which since have been supplied.

At Thirlmere a case of diphtheria broke out in October in a child, and there appeared to be an epidemic of sore throats among neighbouring children who attended Bridge End school.

In November another case occurred at Dearham this case ended fatally.

Enteric Fever A case occurred in a man named W. B. aged 25 years He commenced on the 8th July, and was a colliery engineman, residing at Seaton. He continued work for over a week whilst ill, and the illness could not be traced to any milk or food supply. Many complaints from the house and adjoing property of the foul odours emitted from the man-holes of the sewer were stated.

Whooping Cough

Whooping cough was prevalent in several areas during the past year, and at Flimby in the month of September many were in attendance at school before the disease was recognised.

Measles

Measles were prevalent in the following districts Flimby, Dearham, Outerside, Eaglesfield, Plumbland, Lorton, Greysouthen, and Great Broughton, necessitating closure of schools.

Chickenpox

Chicken pox was more or less prevalent in certain of the villages.

Anthrax and Glanders

None occurred in this area, although several suspected cases were notified.

Public Elementary Schools

The following 13 schools were closed :—

Flimby Infants	4 weeks	Measles
Flimby Boys and Girls	3 ,,	,,
Dearham	4 ,,	,,
Oughterside	1 ,,	,,
Paddle	2 ,,	,,
Plumbland	3 ,,	,,
Lorton	4 ,,	,,
Greysouthen	3 ,,	,,
Great Broughton	2 ,,	,,
Chapel Brow	2½ ,,	Scarlet Fever
Great Clifton Infants	2½ ,,	,,
Setmurthy	3 ,,	Diphtheria
Dearham	2 ,,	Scarlet Fever

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

Common Lodging-Houses

None in the district.

Slaughter-Houses

Referring to the number of slaughter-houses in my Report of 1910, page 19, the same were practically in *statu quo*, notwithstanding the adoption of new bye-laws sanctioned by the Local Government Board. One further slaughter-house was detected at Gilcrux, the floor of which was not impervious, and was not registered.

Unsound Meat or Foods

None has been detected during the year.

Offensive Trades

One tanyard situated at Stainburn. In several villages fish frying and chip potato businesses are carried on.

Bake-Houses

These, without exception, are of an ordinary character, and of a satisfactory character as regards cleanliness and otherwise.

Factories and Workshops

These have been inspected as required by the Act, and any defects noticed have been remedied.

Cow-Sheds Dairies, &c. The registered cowsheds, 69 in number, have been visited regularly, and eight have been registered during the year. The condition of the floors and drainage is far from satisfactory the majority being "cobble paved" and in consequence the ground beneath is permeated with sewage. On the 15th July, 1909, I visited a byre-stead at the Goat and reported that it required serious attention and alterations. The manure heap was far too near this registered byre-stead. Again on another occasion I suggested that a Committee from your Council be formed to go and personally inspect this structure and its surroundings. The number of milk cows averaged 864 during the past year. No veterinary inspection is made thereon except those which supply milk to the Urban districts of Keswick and Cockermouth and these comprise 13 cowsheds containing 154 cattle. The reports received from the veterinary surgeon have always been satisfactory, with one exception, previously refered to.

Ov'rcrowding One case of overcrowding was detected during the year.

Rivers Pollution The condition of these remain as stated in my 1910 report on page 25, paragraph 9.

Rainfall Rain fell on 179 days during the year, as compared with 202 in the proceeding year. The rainfall for the year was 45·76 inches as against 41·17 for 1910. This increase can be accounted for by heavy rainfall which occurred during June and October.

Water Supply The water supply from Crummock and Overwater during the year have been most satisfactory and of exceptional purity. With reference to the villages supplied from the Maryport water scheme the supply appears to be sufficient.

Seven samples were analysed by the County Analyst with the following results:—

At Greenill are eleven houses, and a summer like the one we have experienced causes the inhabitants to have no water supply and I consider the Oughterside water scheme ought to be extended from Bullgill, the cottages on Bullgill Brow also being inadequately supplied.

The water from the Alms Houses pump, Isel, was found to be in an unfit state for domestic consumption. On investigation the cause was found to be arising from a decomposing body of a rabbit which had gained access to the well.

The analysis shows that the water suffers pollution from a source at some little distance from the well, and that in passing through the intervening ground undergoes purification. Such water though harmless at the moment of taking the sample are not to be regarded as safe, since if the purfying action of the soil is overtaxed, they become charged with most dangerous pollution.

I am therfore of the opinion that the well should be closed and the perfectly safe Crummock water supplied to the house.

The analysis shows the water to be highly polluted and quite unfit for human use. Two diphtherias, one death. New supply.

As a surface water this one is of good quality but to eliminate the risk arising from the pollution to which water collected from grazing land is always liable. I would advise that the portion intended for drinking should be boiled or filtered through a Pasture filter.

This is a water of the highest degree of purity and is in every way suited for domestic use.

The water in its present condition is highly polluted and quite unfit for human use, but possibly if it were drawn direct from the spring before being exposed to the very dangerous polluting which Mr. Jackson describes it might be that a hard but perfectly safe drinking water would be obtained.

The Dalton farm water is highly polluted with sewage matter and is utterly unfit for human consumption.

Though the pollution in the Railway Terrace water is less than in that of Dalton Farm it is nevertheless in excess of what is tolerable in a drinking water. This water also is dangerous and the well ought to be closed.

Sanitation

On page 22, paragraph 3, of my Annual Report for 1910, attention was drawn to accommodation of closets for certain schools, and I regret to find no alteration has been attempted to remedy the same, with the exception of Gilcrux which has been remedied.

In my opinion the 2nd paragraph expressed in my Report on page 23, of 1910, should be more seriously considered.

The Houses and Town Planning Act, 1909—As regards this the extensive area of your district greatly impedes the thorough inspection of the premises therein situated. Moreover, your official staff is inadequate to cope with the sanitary duties, and attendance to infectious diseases.

At Brigham, the privies in Church Street require converting into water closets and connecting to the public sewer.

The Bricks property at Flimby—further comment on my previous Reports must be made: Houses back to back, ashpit roofed, but the disgraceful condition of the surrounding ground such as to create disease, as excremental matter and ashes extend from the ashpit for several feet.

The drainage at the Limekiln Inn, Brigham, brought before your Council on the 20th March in my monthly report, still remains in the same insanitary condition.

Two cottages in Station Road, Flimby, were found to have sewer drain connections in their back kitchens, and which at times emitted sewer gas. This has been remedied.

At Gilcrux, a foul odour of sewer gas arising from a manhole was found immediately opposite some cottages. The drain from the back of these cottages passes under one of the same. The construction of this drain through this building is unknown.

Third paragraph, page 24, Report 1910, attention was directed to certain sanitary defects, and the Sanitary Committee visited the places named. It is with diffidence that I find, on further investigation, that nothing has been done.

The insanitary condition of a sewer gutter at Blindcrake, requires attention.

Disinfection of infected houses: This work has been further increased under the Tuberculosis Act, 1912 (January 1st), which increases the duties of the officials. The result of this in an area of 158,113 acres (exclusive of area covered by water) is utterly impossible to be properly investigated. For example, a case at Skellgill, Newlands, which was investigated on the 19th July, when it was ascertained that there were 11 inmates, of which 5 were adults, and the remainder ranged down from 15 to 5 years of age. In addition there were 2 servants. Between 3 and 4 years ago the wife of the occupant died of doubtful cancer or phthisis; also at the same time a daughter, aged 19, died of phthisis.

This lady's sister, brother and father died from this complaint. The house is of this description: a dark, dull room, some 2 feet below ground level at one side, and 5 or 6 feet on another side. The window was 3ft. 2ins. by 1ft. 7ins. and a small one 1ft. 6ins. by 6ins. The base of the east and west walls damp. The dairy, direct entrance from kitchen and has a small window 1ft. 8ins. by 1ft. 8ins. The back door enters this dairy and is in a most insanitary condition, as the setting around the grating at the back door was in very bad repair on inspection. The front house was flagged with blue slate the joints showing the earth beneath. Fireplace, window 4ft. 6ins. by 3ft., sashes, height of ceiling, 6ft. 9ins. Walls damp at base and on the north side. Parlour : fireplace,window 3ft. 4ins. by 1ft. 10ins. sliding sash, height of ceiling, 6ft. 9ins. Bedroom : over kitchen, no fireplace, movable sky-light. Bedroom : over front house, no fireplace, window sash. Second bedroom over front house, no fireplace, window, sash 2ft. 2ins. by 1ft. These two rooms have been made out of one and the window divided between them. Bedroom : over parlour, fireplace, window, sliding sash. Staircase has no window. The base of the entrance hall is damp. Good water supply, with water closet outside. This affords you a grand example of some of the property which exists in this district.

A public enquiry was held in the Co-operative Hall, Great Clifton, under the presidency of H. Shelford Bedwell, Esq., M.Inst.C.E., Inspector of the Local Government Board, on Friday, the 22nd day of September, 1911, at 10 o'clock in the forenoon, with reference to an application for sanction to borrow £1,750 for purposes of sewage and sewage disposal for the parish of Great Clifton.

During the year your Inspector of Nuisances has inspected a considerable number of houses. I regret to state that so far nothing has been done to remedy any of the defects so found.

Dangerous Premises

Special attention has in previous years been made by me to certain properties in Bassenthwaite, and on the County Highway leading between Cockermouth and Workington, but these matters were not taken so seriously as they ought to have been. Surely rural districts require the same protection for the public as urban areas.

Where is there a more dangerous unoccupied house than one on the main thoroughfare between Workington and Cockermouth about half way distant between bothtowns. (The cause subsidence of an old pit.) To place hoarding around the asme as granted by Urban Powers in the past is useless, it requires total demolition. This power extends to others in a similar state, and which you have jurisdiction without magistrates order to carry out through the Housing, and Town Planning Act.

This is in the hands of the County Council owing to the scattered nature of the district and the long distances many of the children have to traverse, often in very inclement weather, they reach school in a wet condition; this means remaining in that state during the school period. I would suggest that the parents provide an extra pair of stockings and where preferable, slippers, which could be used while their wet shoes were being dried. Further, it would be a decided advantage and add very materially to the child's health if each school had cooking a range with oven, whereby some kind of hot food could be had at the dinner hour. These conditions exist in at least two schools for change of foot wear, and in one for cooking. This is a matter that might receive serious consideration of the County Education Authority and School Managers.

Annexed to this report are the usual statistical tables.

RAINFALL AT BROUGHTON GRANGE, 1911.

Date	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept,	Oct,	Nov.	Dec.
1	..	...	0·14	...	0·25	...	0·01	0·01	...	...	0·65	0·21
2	0·03	...	0·20	...	0·50	...	0·16	0·06	...	0·10	0·05	0·40
3	...	...	0·30	...	1·15	...	0·02	0·02	...	...	1·03	0·37
4	...	...	0·02	...	..	...	0 02	0·31	...	...	0 52	0·13
5	0·40	...	0·10	...	...	...	...	0·63	...	...	...	0·07
6	0·10	...	...	0·09	...	...	...	0·14	...	...	0·22	0·62
7	0·10	...	0·05	...	0·10	...	..	...	...	...	0·51	0·01
8	0·02	0·01	0·12	...	...	...	...	...	..	...	0·83	0·50
9	...	...	...	...	...	...	...	..	...	...	...	0·18
10	1·00	...	0·12	...	...	...	...	...	0·02	...	0·01	0·94
11	0·08	...	0·06	...	0·02	...	...	...	...	...	...	0·01
12	...	0·05	0·03	...	0·45t	...	...	...	0·38	...	0·66	...
13	...	0·48	...	...	0·01	...	...	...	...	...	0·17	0·01
14	0·06	0·41	...	...	...	...	...	...	...	...	0·45	0·03
15	0·08	0·40	0·03	0·09	...	...	...	...	...	0·02	0·24	0·16
16	0·07	0·12	0·10	0·06	...	...	0·20	...	...	...	0·14	0·29
17	...	0·04	...	0·02	...	0·40	0·07	...	...	...	0·39	0·15
18	...	0·80	...	1·15	...	0·10	...	...	1·18	...	0·10	0·71
19	...	...	...	0 62	...	0·10	0·01	...	...	0·50	0·07	0·47
20	...	0·25	...	0 39	...	...	0 29	0·05	...	0·07	...	0·49
21	0·01	0·58	...	0·49	...	0·67	...	...	0·10	0·10	...	0·03
22	...	0·16	...	0·14	...	0·34	...	...	...	..	...	...
23	0.07	0·12	...	0·07	0 19	0·05	...	...	...	0 20	...	0·31
24	0·38	0·10	...	0·43	0·03	2·72	...	0·09	0·20	0·30	...	0·19
25	...	0·43	0·03	0·90	...	0·07	...	0·05	0·01	0·14	...	0·21
26	0·01	0·03	...	0·02	...	...	...	0·21	0·07	0·20	0·06	0·25
27	...	0·40	...	0·15	...	0·01	0·25	0·24	0·02	...	0·15	0·04
28	...	0·12	...	0·34	...	0·23	0·08	0·16	0·40	...	0·14	0·37
29	...	...	. .	0 55	...	0·44	0·04	...	0·09	1·96	0·01	0·46
30	...	...	...	...	...	0·03	...	...	0·32	0 75	0·16	0·01
31	..	...	...	...	0·30t	...	...	0·50	...	0·12	...	0·08
	2·41	4·50	1·12	4·51	3·00	5·07	1·15	2·47	2·79	4·46	6·56	7·70
on d'ys	14	17	13	16	10	12	11	13	11	12	21	29

Total for year, 45·74, on 179 days.

Note on 1911 Rainfall.—Although the total rainfall is 5 inches above the average for 39 years, the number of days on which rain fell is 20 below the average. This is accounted for by the exceptional number of heavy falls, that of June 24th, viz. : 2·72 inches being the heaviest recorded here, and the fall on October 29th and 30th in 18 hours (9 p.m. to 3 p.m.) was 2·71 inches.

January 25 to February 12	... 19 days with only 0·02 of rain.
March 17 to April 14	... 28 do. 0.12 do.
June 1 to 16	... 16 days no rain.
August 6 to 23	... 17 days with only 0 05 of rain.
October 1 to 18	... 18 do. 0·12 do.

Above Sea Level 209 feet.

INCHES OF RAINFALL AT BROUGHTON GRANGE, COCKERMOUTH, FOR 1911 AND PREVIOUS YEARS.

G. S. WILSON.

DATES.	1902		1903		1904		1905		1906		1907		1908		1909		1910		1911		Greatest fall in 24 hours		Average 33 years, 1873 to 1904.
	Rain	On days	Rain	On days	Rain	On days	Rain	On days	Rain	On days	Rain	On days	Rain	On days	R ain	On days	Rain	On days	Rain	On days	Inches	Date	Rain Inches
January	3·15	19	4·32	15	3·70	22	1·25	17	5·67	25	1 45	14	4·34	18	3·38	19	3·43	20	2·41	14			3·489
February	0·84	10	5·18	21	3·05	19	2 54	19	2·66	17	2·00	11	2 92	19	2 35	8	6·12	26	4·50	17			2·757
March	2·12	22	6·61	28	2·86	16	3·25	23	2·40	15	4·24	18	3·69	18	3·67	19	3.20	13	1·12	13			2 780
April	1·55	13	1·55	15	3·03	21	3·54	19	1·42	10	2·54	13	1·53	16	2·83	16	2 49	19	4·51	16			2·018
May	2·69	24	2·63	19	2·80	21	2·67	11	4·77	25	3·98	19	2·70	20	1·73	14	2·64	16	3·00	10			2·400
June	1·57	14	1.29	9	1·44	13	1·89	5	1·75	9	5 54	25	2·93	14	2·53	14	1·51	9	5·07	12			2·515
July	3·47	17	4·52	20	2·77	10	2·61	13	2·50	18	1·88	14	3·62	17	6·98	23	3·81	15	1·15	11			3·382
August	2·86	15	5·54	25	4·07	21	3·26	19	5·59	21	4·64	22	4 70	19	2·61	18	5·32	21	2·47	13			4·487
September	1·61	16	5·15	19	2·38	11	3·18	18	1·37	6	0·36	4	4·72	24	2·42	13	0·91	10	2·79	11			4·162
October	3·32	17	8·75	30	2·52	15	2·67	12	5·95	25	7 08	25	1·75	11	8·66	22	2·69	12	4·46	12			4·480
November	2·25	17	3·79	21	3·73	19	3·96	17	4 17	19	4·37	16	3·27	17	2·11	14	4·23	14	6·56	21			4·227
December	3·77	16	3·50	16	4·87	18	3·11	18	3·37	20	5·89	20	3·30	23	6·78	16	4·82	27	7·70	29			4·023
	29·20	200	52·83	238	37·22	206	33·93	191	41·62	210	43·97	201	39·47	216	46·05	196	41·17	202	45·74	179			40·720

Cockermouth Rural District.

Annual Report of the Medical Officer of Health for the year 1911, on the administration of the Factory and Workshop Act, 1901, in connection with

FACTORIES, WORKSHOPS, &c.

	Inspections.
Factories	23
Workshops	81
Workplaces	20
Total ...	124

Defects Found.

	Found.	Remedied.
Want of Cleanliness ...	2	1
Total ...	2	1

Registered Workshops.

Fried Fish	8
Iron Furnaces	1
Coke and Chemical Works	2
Coalpits	11
Lead Mines	1
Pit Banks	5
Brick Works	5
Laundries	3
Linen Mill	1
Breadmakers	15
Flour Mills	11
Saw Mills	6
Shoemakers and Cloggers	18
Joiners	30
Blacksmiths	16
Tailors	7
Tannery	1
Dressmakers	11
Bicycle Works	2
Total number of workshops on Register ...	154

JOHN PENNY, M.B., D.Sc., F.R.S.E.,
Medical Officer of Health.

28th Feb., 1912.

Summary of Work done through the Inspector of Nuisances, during the year ending 31st Dec., 1911.

1	Number of Complaints received	30
2	Nuisances detected and reported	577
3	Number of ashpits cleansed	382
4	Number of drains cleansed	14
5	Number of midden contents removed	9
6	Other nuisances abated	19
7	Drains made or repaired	44
8	Traps put in	33
9	Structural defects of houses repaired	13
10	Houses sewered	25
11	Houses water supply improved	16
12	Houses cleansed	2
13	Houses disinfected	131
14	Midden privies converted into pail privies	2
15	do. do. water closets	8
16	New water closets erected	21
17	Water closets repaired	13
18	Ashpits and privies built or repaired	9
19	Urinals erected	2
20	Schools sewered	1
21	Schools water supply improved	2
22	Schools disinfected	8
23	Animals or poultry removed	9
24	Pigstyes rebuilt or altered	2
25	Samples of water analysed	7
26	Samples of water condemned	5
27	Number of infectious cases visited	164
28	Scarlet fever cases removed to hospital	53
29	Number of cowsheds registered during 1911	8
30	Number of cowsheds on register	69
31	Number of Inspections of cowsheds	187
32	Number of dairy cows (variable)	864?
33	Number of cowsheds inspected by Veterinary Surgeon	13
34	Number of cows examined do.	154?
35	Number of Factories and Workshops on register	152
36	Number of Factory and Workshop inspections	124
37	Number of Slaughter houses	25
38	Number of Slaughter house inspections	41
39	Notices from head teachers and school attendance officers re children attending school with some ailment	119
40	Number of informal notices	146
41	Number of statutory notices	331
42	Number of notices complied with	417
43	Number of Nuisances still existing	60

Signed—JOHN WILLIAM JACKSON,
Inspector of Nuisances.

TABLE I.—*Cockermouth Rural District.*

VITAL STATISTICS OF WHOLE DISTRICT DURING 1911 AND PREVIOUS YEARS.

Year.	Population estimated to Middle of each Year.	Nett Births.		Total Deaths registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
								Under 1 year of age.		At all Ages.	
		Un-corr ect'd Number.	Rate.	Number.	Rate.	of Non-residents registered in the District.	of Residents not registered in the District.	Number.	Rate per 1000 Nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12
1906	22112	641	28·9	297	13·4	...	...	77	120	...	...
1907	22112	632	28·5	338	15·2	...	...	74	117	...	...
1908	22210	603	27·1	362	16·2	...	...	103	172	369	16·61
1909	22250	670	30·1	282	12·6	...	...	62	92	302	13·57
1910	22250	600	26·9	333	14·9	...	...	66	110	350	15·73
1911	22233	588	26·4	273	12·2	...	4	66	112	277	12·4

Area of District in acres (exclusive of area covered by water)—158113·464.
Total population at all ages—22,233.
Number of inhabited houses—Unknown.
Average number of persons per house—Unknown.

TABLE II.—*Cockermouth Rural District.*

Cases of Infectious Disease notified during the Year 1911.

NOTIFIABLE DISEASE.	Cases notified in Whole District.							Total Cases notified in each locality.				Total Cases removed to Hospital.
		Ages.†—Years.						1	2	3	4	
	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	K.R.D.	C.R.D.	W.R.D.	M.R.D.	
Smallpox												
Cholera												
Diphtheria (including Membranous croup) ...	27		9	16		1	1	5	9	9	5	
Erysipelas	10		1	2		4	3		4	4	2	
Scarlet fever	124		30	78	12	3	1	5	1	29	89	53
Typhus fever												
Enteric fever	1					1				1		
Relapsing fever ...												
Continued fever ...												
Puerperal fever ...	2					2				1	1	
Plague												
Phthisis — Under Tuberculosis Regulations, 1908												
Phthisis — Under Tuberculosis Regulations, 1911												
Phthisis — Others												
TOTALS	164		40	96	12	11	5	9	13	44	97	

Isolation Hospital—Broughton Moor. Total available beds—15.

Number of Diseases that can be concurrently treated—Scarlet Fever only.

TABLE III.—*Cockermouth Rural District.*

Causes of, and Ages at, Death during Year 1911.

CAUSES OF DEATH.	Deaths in whole District at subjoined Ages.									Deaths in Public Institutions.
	All ages.	Under 1.	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	
1	2	3	4	5	6	7	8	9	10	11
Enteric Fever	...	...	...	...	...	...	...			
Small-pox					...	...	...			
Measles		...					...			
Scarlet fever	1			1	...	...	...			
Whooping-cough ...	6	5		1						
Diphtheria & croup ...	5	...		2	3	...	...			
Influenza	2	1	...	1	...	...	...			
Erysipelas		...	...	...	...	...	...			
Phthisis (Pulmonary Tuberculosis) ...	11	...	...	...	...	4	4	2	1	
Tuberculous Meningitis ...	1	...	...	...	1					
Other tuberculous diseases	3	...	1	...	...	2	...			
Rheumatic Fever ...	...	...	...	...	...	...	...			
Cancer, malignant disease	13			...	...	...	...	5	8	
Bronchitis	20	8		1	...		1	2	8	
Broncho-Pneumonia ...	4	3		1	...	...				
Pneumonia (all other forms)	16	2	...	1	...	1	5	2	5	
Other diseases of Respiratory organs ...	3	...	...	...	...	...	1	2		
Diarrhœa and Enteritis ...	8	6	...			1			1	
Appendicitis and Typhlitis	1	...		...		1	...			
Alcoholism Cirrhosis of liver } ...	1	...		...	...			1		
Nephritis and Bright's Disease	6			1				2	3	
Puerperal fever ...	2						2			
Diseases and accidents of parturition	4	2	...	...			2			
Congenital Debility and Malformation, including Premature Birth ...	16	15	1							
Violent Deaths, excluding Suicides	10		1	2	1	1	4		1	
Suicides	3		...				2	1		
Heart disease	33	1			1	1		10	20	
Other defined diseases ...	95	15	1		3	3	4	14	55	
Diseases ill-defined or unknown	9	8		1			...			
All causes—Certified ...	273	66	4	12	9	13	24	37	100	265
—Uncertified ...						1	1	4	2	8

TABLE IV.—*Cockermouth Rural District.*

INFANT MORTALITY DURING THE YEAR 1911.

Nett Deaths from stated Causes at various Ages under 1 Year of Age.

	CAUSE OF DEATH.	Under 1 Week.	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 1 month	1-3 Months	3-6 Months	6-9 Months	9-12 Months	Total Deaths under One Year.
Common Infectious Diseases.	Small-pox ...										
	Chicken-pox .										
	Measles ...										
	Scarlet Fever ...										
	Diphtheria : Croup ...										
	Whooping Cough ...			1		1	2	1			4
Diarrhœal Diseases	Diarrhœa, all forms ...						1		1		2
	Enteritis (not Tuberculous) ...				1	1		1		2	4
Tuberculous Diseases	Tuberculous Meningitis ...										
	Abdominal Tuberculous...										
	Other Tuberculous Diseases ...										
Wasting Diseases.	Congenital Defects ...	3			1	4					4
	Premature Birth ...	5	1		1	7					7
	Atrophy, Debility, Marasmus ...	4	1	2	1	8			1		9
Other Causes.	Atelectasis ...		1			1					1
	Injury at Birth ...	1				1					1
	Erysipelas ...										
	Syphilis ...										
	Rickets ...										
	Meningitis (not Tuberculous) ...										
	Convulsions ...	2			1	3	1		3	1	8
	Gastritis ...						1		1	3	5
	Laryngitis ...										
	Bronchitis ...		1	1		2	2	3	1		8
	Pneumonia (all forms) ...						1	1	1	2	5
	Suffocation, overlying ...										
	Other Causes ...						1	2	2	2	7
	Heart Disease ...	1				1					1
All Causes	Certified ...	15	4	4	5	28	8	8	9	9	62
	Uncertified ...	1				1	1		1	1	4

Nett Births in the year—legitimate ... 559.
illegitimate .. 29.
Nett Deaths in the year—legitimate infants 63.
illegitimate ... 3.